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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/138,339	08/21/1998	TIMOTHY R. PRYOR	IV/L/P5591	3965

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LARSON & TAYLOR
1199 NORTH FAIRFAX STREET
SUITE 900
ALEXANDRIA, VA 22314

EXAMINER

NELSON, ALECIA DIANE

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 01/03/2002

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/138,339

Applicant(s)

Pryor

Examiner

Alecia Nelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 14, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 65-81 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 65-81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 65-69, 71-74, 77, and 79-81** rejected under 35 U.S.C. 102(b) as being anticipated by Oh (U.S. Patent No. 5,616,078).

With reference to **claims 65, 73, 74, 80, and 81**, Oh teaches a method for input, by a person (Q), of data to a computer having a display (4) (see column 1, lines 7-12) comprising at least two spaced TV cameras (31, 31') provided on the display (4) for acquiring at least a stereo pair of images of one or more dataums (M) associated with the person (Q) (see column 4, line 43-column 5, line 3), determining from the images acquired by the TV cameras (31, 31'), the three dimensional position of at least one of the datums (M) (see column 5, lines 11-23) and controlling the display based on the postion of the datum (M) (see column 5, lines 51-65). With reference to **claim 66**, Oh also teaches that video cameras (31, 31') are disposed at positions such as upper positions of the opposite sides of the front wall and at upper positions of the corner portions defined between the front wall and the oppositie side wall, or at uppoer positions of the opposite side walls in the vicinity of the corner portions (see column 4, lines 43-59). With reference to

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claims 67-69, 77, and 79, it is further taught that the sets of markers (M) are adapted to indicate body parts or joints of the player (Q) such as a head, hands (which includes fingers), arms legs, and elbows (see column 4, lines 50-52), and that each marker (M) include a light omitting or reflecting member (see column 4, lines 52-55). The sets of markers (M) may directly be attached to the body of the player (Q) or the player (Q) may put on a special clothes (see column 4, lines 55-59). With reference to **claim 71**, Oh teaches that an image processor (33) includes a unit (333) that converts the two dimensional coordinates of the sets of markers (M) into three-dimensional coordinates (see column 5, lines 11-23). Also with reference to **claim 72**, there is taught a second embodiment (Figure 6) which is designed for two or more players (see column 8, lines 23-28).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 70, 75, 76, and 78** are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh as applied to **claim 1** above, and further in view of Naoi et al. (U.S. Patent No. 5,459,793).

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With reference to **claims 70, 75, and 76**, Oh teaches all that is required as explained above with reference to **claim 1**, however fails to specifically teach that a light source proximate to each TV camera is used to illuminate the datums. However, as explained above, the markers (M) of Oh, each include a light emitting or reflecting member (see column 4, lines 50-55). It is also taught that cameras (31, 31') each include an image sensor which detects object images (see column 4, line 59-column 5, line 3).

Naoi et al. teaches a plurality of light sources (14) in which the direction of the irradiation light from the light source (14) coincides with the direction of the TV camera (see column 3, lines 67-column 4, line 3).

With reference to **claim 78**, Oh and Naoi et al. fail to specifically teach that the markers (M) are of a specific shape being that of a point or a line. Naoi et al. does teach that the color marker (24) is formed by a spherical body or polygonal body thereby having a full reflection surface so that it is possible to ensure sufficient reflected light from the marker (24) (see column 4, line 64-column 5, line 1).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for the light source to come from the camera in order to illuminate the markers, which is shaped to receive a sufficient amount of light, to thereby detect and calculate the orientation of the user to thereby control the 3-D object being displayed.

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Conclusion

5. Any response to this action should be mailed to: Commissioner of Patents and Trademarks Washington, D.C. 2023; or faxed to: (703) 308-9051, (for formal communications intended for entry) or: (703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT"). Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is (703)305-0143 between the hours of 8:00 a.m and 5:00 p.m. on Monday-Friday.

If attempts to reach the above examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703)305-9720.


DENNIS-DOON CHOW
PRIMARY EXAMINER

adn/ADN
December 30, 2001